

On July 13, 2012, The Environmental Protection Agency (EPA)- Criminal Investigation Division (CID) was contacted by the Office of the United States Attorney, District of Colorado, regarding allegations that Abound Solar, Inc. (Abound) was illegally disposing of cadmium contaminated waste rinsate in an unpermitted disposal facility on multiple occasions since 2009. It is also alleged that Abound has provided the United States Government with material false statements and false representations that relate to Abound's environmental compliance with the United States Department of Energy's (USDOE) section 1705 loan guarantee program and EPA hazardous waste regulations. Additionally, it is alleged that Abound has made material false representations to the USDOE relating to the company's ability to repay federal money drawn out of the USDOE section 1705 loan that the company received in December 2010.

On October 12, 2012, EPA-CID and USDOE Office of Inspector General (OIG) contacted (b) (6), (b) (7)(C) former engineer for Abound Solar Inc. (b) (6), (b) (7) stated that he developed the process of using water to remove the cadmium chloride from solar panels manufactured by Abound. Rinsing the solar panels with water created a sludge of cadmium chloride and water. (b) (6), (b) (7) asserted that Abound would use 50-70 pounds of cadmium in their process, which would make the company the largest user of cadmium chloride in the world. (b) (6), (b) (7) believes this was a fact that was not reported to the USDOE. (b) (6), (b) (7) stated that he wanted to come up with a way to capture and re-crystallize the cadmium chloride in the process. (b) (6), (b) (7) asserted that it would have cost the company \$5 million to set up a system to recapture and re-crystallize the cadmium chloride, and that the system never came to fruition. (b) (6), (b) (7) provided that he came up with a plan to use ion resin to extract the cadmium. At the beginning, Abound used small blue canisters that contained the ion resin and paid a company to dispose of the canisters as hazardous waste. Later, Abound decided to use larger tanks that contained the ion resin. (b) (6), (b) (7) related that the Abound employees were supposed to test the cadmium concentrations between the ion tanks to ensure that the cadmium was not breaking through the ion resin. (b) (6), (b) (7) asserted that the ion resin was also supposed to be tested to determine if it was hazardous waste. (b) (6), (b) (7) related that during the fall of 2009, a few Abound employees expressed their concerns that the tanks were not being tested. (b) (6), (b) (7) advised that these employees sent a complaint to the EPA, and were subsequently fired. (b) (6), (b) (7) provided that because the testing was not occurring regularly, the information entered into the facilities log book was falsified. (b) (6), (b) (7) recalled receiving a request from (b) (6), (b) (7)(C) for TCLP analytical results for the ion beads. (b) (6), (b) (7) asserted that the analytical tests were invalidated because they were rinsed prior to analysis. (b) (6), (b) (7) stated that Abound dumped ten thirty cubic foot containers containing ion resin beads contaminated with cadmium into the landfill. (b) (6), (b) (7) asserted that the ion resin was not tested to determine if it was hazardous waste.

(b) (6), (b) (7) also provided that the Abound solar panels would catch on fire and that it was rumored that the solar panels had a 99% fail rate. (b) (6), (b) (7) stated that the root cause of the problem was insufficient conductive materials in the adhesive tape on the buss bar of the solar panels. (b) (6), (b) (7) asserted that Abound knew that the problem existed before they turned in the loan application into the USDOE. (b) (6), (b) (7) provided that because Abound maintained a quota for their panels, they continued to manufacture faulty panels.

On October 12, 2012, EPA-CID and USDOE OIG contacted (b) (6), (b) (7)(C) former water quality expert for Abound. (b) (6), (b) (7)(C) related that the cation resin beads, which captured the cadmium, were supposed to be treated as hazardous waste. (b) (6), (b) (7)(C) advised that the beads have the capability to exchange ions and release the cadmium. (b) (6), (b) (7)(C) stated that Siemens conducted a study that indicated that the resin beads were supposed to be handled as hazardous waste because of the ion exchange issue. (b) (6), (b) (7)(C) asserted that he and (b) (6), (b) (7)(C) advised Abound management many times that the resin was supposed to be handled as hazardous waste. (b) (6), (b) (7)(C) provided that the small tanks that were previously used by Abound, which contained the cadmium resin beads, were treated as hazardous waste. (b) (6), (b) (7)(C) asserted that the cadmium contaminated resin beads were transported on the back of a pickup truck to the Culligan Water facility in Brighton, CO. (b) (6), (b) (7)(C) stated that he and another Abound employee sent a complaint to the EPA in 2010 or 2011 to voice their concerns regarding glass panels contaminated with cadmium and cadmium contaminated air.

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On October 12, 2012, EPA-CID and USDOE OIG contacted (b) (6), (b) (7)(C) of Culligan Water Conditioning. (b) (6), (b) (7) advised that Culligan began working with Abound in July 2007, and was involved with the industrial water treatment for the Abound facility, which included the tanks and the ion resin. (b) (6), (b) (7) advised that Culligan would not take resin tanks full of cadmium contaminated water. (b) (6), (b) (7) related that the water was evacuated from the tanks on the Abound facility and that the tank with the resin would be taken back to the Culligan facility in Brighton, CO. The ion resin was then disposed of in dumpsters located in the back of the Culligan facility.

On October 15, 2012, EPA-CID and USDOE OIG again contacted (b) (6), (b) (7)(C) indicated that he would transport the tanks of ion resin to the Culligan facility and dispose of the resin at least once a week.

On October 17, 2012, EPA-CID contacted (b) (6), (b) (7)(C) Compliance Enforcement Officer for the Colorado Department of Public Health and Environment (CDPHE). (b) (6), (b) (7)(C) stated that Abound was a large quantity generator of hazardous wastes and that the resin was never brought to (b) (6), (b) (7)(C) attention. (b) (6), (b) (7)(C) also stated that failing to properly characterize their hazardous waste and improperly disposing of hazardous wastes would be a violation of Colorado law.

If substantiated, the allegations would constitute a violation of the Resource Conservation and Recovery Act (42 United States Code § 6928 (d) (1); transportation of a hazardous waste to a unpermitted facility; 42 U.S.C. § 6928 (d) (2) (A); knowingly treating, storing, or disposing of a hazardous waste without a permit).